VPDES PERMIT PROGRAM FACT SHEET

FILE NO: 33

This document gives pertinent information concerning the VPDES Permit listed below. This permit is being processed as a **MAJOR INDUSTRIAL** permit.

1. **PERMIT NO.**: VA0003018 **EXPIRATION DATE**: May 15, 2010

2. **FACILITY NAME AND LOCAL MAILING ADDRESS**

Western Refining Yorktown, Inc.
2201 Goodwin Neck Road
Yorktown, VA 23692

FACILITY LOCATION ADDRESS (IF DIFFERENT)

Same

CONTACT AT FACILITY:
NAME: Ms. Jane Kelley
TITLE: Environmental Manager
PHONE: (757) 898-9732

CONTACT AT LOCATION ADDRESS
NAME: Same
TITLE:
PHONE: ( )

3. **OWNER CONTACT**: (TO RECEIVE PERMIT)
NAME: Mr. John A. Rossi
TITLE: Vice President
COMPANY NAME: (IF DIFFERENT)
ADDRESS: 2201 Goodwin Neck Road
Yorktown, VA 23692
PHONE: (757) 898-9727

CONSULTANT CONTACT:
NAME:
FIRM NAME:
ADDRESS:

PHONE: ( )

4. **PERMIT DRAFTED BY**: DEQ, Water Permits, Regional Office

Permit Writer(s): Melinda Woodruff Date(s): 12/14/2009
Reviewed By: Mark Sauer Date(s): 3/12-16/10

5. **PERMIT ACTION:**

( ) Issuance (x) Reissuance ( ) Revoke & Reissue ( ) Owner Modification
( ) Board Modification ( ) Change of Ownership/Name [Effective Date:]

6. **SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:**

Attachment 1	Site Inspection Report/Memorandum
Attachment 2	Discharge Location/Topographic Map
Attachment 3	Schematic/Plans & Specs/Site Map/Water Balance
Attachment 4	TABLE I - Discharge/Outfall Description
Attachment 5	TABLE II - Effluent Monitoring/Limitations
Attachment 6	Effluent Limitations/Monitoring Rationale/Suitable Data/Antidegradation/Antibacksliding
Attachment 7	Special Conditions Rationale
Attachment 8	Toxics Monitoring/Toxics Reduction/WET Limit Rationale
Attachment 9	Material Stored
Attachment 10	Receiving Waters Info./Tier Determination/STORET Data/Stream Modeling
Attachment 11	303(d) Listed Segments
Attachment 12	TABLE III(a) and TABLE III(b) - Change Sheets
Attachment 13	NPDES Industrial Permit Rating Worksheet and EPA Permit Checklist
Attachment 14	Chronology Sheet
Attachment	Public Participation

APPLICATION COMPLETE: February 10, 2010

7. **PERMIT CHARACTERIZATION:** (Check as many as appropriate)

(x) Existing Discharge
( ) Proposed Discharge
( ) Municipal
SIC Code(s)
(x) Industrial
SIC Code(s)2911
( ) POTW
( ) PVOTW
(x) Private
( ) Federal
( ) State
( ) Publicly-Owned Industrial

(x) Effluent Limited
(x) Water Quality Limited
( ) WET Limit
( ) Interim Limits in Permit
( ) Interim Limits in Other Document
( ) Compliance Schedule Required
( ) Site Specific WQ Criteria
( ) Variance to WQ Standards
( ) Water Effects Ratio
(x) Discharge to 303(d) Listed Segment
(x) Toxics Management Program Required
( ) Toxics Reduction Evaluation
(x) Storm Water Management Plan
( ) Pretreatment Program Required
( ) Possible Interstate Effect
(x) CBP Significant Dischargers List

8. **RECEIVING WATERS CLASSIFICATION:** River basin information.

Outfall No(s): 001 (101, 102), 002 (201), 004

Receiving Stream:	York River
River Mile:	8-YRK 1.88, 8-YRK 1.86, 8-YRK 1.89
Basin:	York River Basin
Subbasin:	NA
Section:	1
Class:	II
Special Standard(s):	a, NEW-17
Tidal:	YES
7-Day/10-Year Low Flow:	N/A
1-Day/10-Year Low Flow:	N/A
30-Day/5-Year Low Flow:	N/A
Harmonic Mean Flow:	N/A

9. **FACILITY DESCRIPTION:** Describe the type facility from which the discharges originate.

EXISTING industrial discharge resulting from the operation of a petroleum refining facility.

10. **LICENSED OPERATOR REQUIREMENTS:** ( ) No (x) Yes Class: **II**

11. **RELIABILITY CLASS:** Industrial Facility - NA

12. **SITE INSPECTION DATE:** September 30, 2009 **REPORT DATE:** October 2, 2009

Performed By: Clyde Gantt

SEE ATTACHMENT 1 (Site Visit Memo December 2009 included)

13. **DISCHARGE(S) LOCATION DESCRIPTION:** Provide USGS Topo which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: Poquoson West Quadrant No.: 65B **SEE ATTACHMENT 2**

14. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.]. FOR INDUSTRIAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE PRODUCTION CYCLE(S) AND ACTIVITIES. FOR MUNICIPAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE TREATMENT PROVIDED.**

Narrative: The Refinery produces unleaded gasoline, diesel fuels, liquefied petroleum gas, butane, furnace oil, petroleum coke, and sulfur. Currently, the Refinery has the capacity to refine approximately 70,000 barrels of crude oil per day.

SEE ATTACHMENT 3 (CAN ALSO REFERENCE TABLE I)

15. **DISCHARGE DESCRIPTION**: Describe each discharge originating from this facility.

SEE **TABLE I** (OR CAN SUBSTITUTE PAGE 2C) - **SEE ATTACHMENT 4**

16. **COMBINED TOTAL FLOW**:

TOTAL: 77.45 MGD (for public notice)

PROCESS FLOW: 71.24 MGD (IND.)(101,102)

NONPROCESS/RAINFALL DEPENDENT FLOW: 6.21 (Est.)(200, 201, 004)

DESIGN FLOW: 0.003 MGD (MUN.)(101 municipal)

17. **STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS AND SPECIAL CONDITIONS**: (Check all which are appropriate)

- X State Water Control Law
- X Clean Water Act
- X VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
- X EPA NPDES Regulation (Federal Register)
- ___ EPA Effluent Guidelines (40 CFR 133 or 400 - 471)
- X Water Quality Standards (9 VAC 25-260-5 et seq.)
- ___ Wasteload Allocation from a TMDL or River Basin Plan

18. **EFFLUENT LIMITATIONS/MONITORING**: Provide all limitations and monitoring requirements being placed on each outfall.

SEE TABLE II - ATTACHMENT 5

19. **EFFLUENT LIMITATIONS/MONITORING RATIONALE**: Attach any analyses of an outfall by individual toxic parameter. As a minimum, it will include: statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); wasteload allocation (acute, chronic and human health); effluent limitations determination; input data listing. Include all calculations used for each outfall and set of effluent limits and those used in any model(s). Include all calculations/documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for limiting internal waste streams and indicator pollutants. Attach chlorine mass balance calculations, if performed. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested variances or alternatives to required permit conditions/limitations. This includes, but is not limited to: waivers from testing requirements; variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions.

N/A

SUITABLE DATA: In what, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

All suitable effluent data were reviewed.

ANTIDEGRADATION REVIEW: Provide all appropriate information/calculations for the antidegradation review.

The receiving stream has been classified as tier 1; therefore, no further review is needed. Permit limits have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

There are no backsliding issues to address in this permit (i.e., limits as stringent or more stringent when compared to the previous permit).

SEE ATTACHMENT 6

20. **SPECIAL CONDITIONS RATIONALE:** Provide a rationale for each of the permit's special conditions.

SEE ATTACHMENT 7

21. **TOXICS MONITORING/TOXICS REDUCTION AND WET LIMIT SPECIAL CONDITIONS RATIONALE:** Provide the justification for any toxics monitoring program and/or toxics reduction program and WET limit.

SEE ATTACHMENT 8

22. **SLUDGE DISPOSAL PLAN:** Provide a description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.

Flows from the aboveground and belowground sewer systems go to the Corrugated Plate Interceptor (CPI) Separators at the facility. CPI Separators recover sludge and oil from process wastewater. Recovered oil from the CPI separators is recycled through the slop oil system. Sludge from the CPIs, is recycled in the Coker. In the event the material cannot be processed at the Coker, CPI sludge may be sent as a hazardous waste to an approved off-site facility.

23. **MATERIAL STORED:** List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching State waters.

SEE ATTACHMENT 9

24. **RECEIVING WATERS INFORMATION:** Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260-5 et seq.). **Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied.** Attach any memoranda or other information which helped to develop permit conditions (i.e. tier determinations, PReP complaints, special water quality studies, STORET data and other biological and/or chemical data, etc.

SEE ATTACHMENT 10

25. **305(b)/303(d) Listed Segments:** Indicate if the facility discharges to a segment that is listed on the current 303(d) list and, if so, provide all appropriate information/calculations.

This facility discharges directly to York River. This receiving stream segment has been listed in Category 5 of the 305(b)/303(d) list for non-attainment of aquatic plants, open water aquatic life and shallow-water submerged aquatic vegetation dissolved oxygen, attributed to excessive nutrients; fish consumption attributed to PCB in fish tissue. A TMDL has not been prepared or approved for this stream segment. The permit contains a TMDL reopener clause which will allow the it to be modified, in compliance with Section 303(d)(4) of the Act once a TMDL is approved.

SEE ATTACHMENT 11

26. **CHANGES TO PERMIT:** Use **TABLE III(a)** to record any changes from the previous permit and the rationale for those changes. Use **TABLE III(b)** to record any changes made to the permit during the permit processing period and the rationale for those changes [i.e., use for comments from the applicant, VDH, EPA, other agencies and/or the public where comments resulted in changes to the permit limitations or any other changes associated with the special conditions or reporting requirements].

SEE ATTACHMENT 12

27. **NPDES INDUSTRIAL PERMIT RATING WORKSHEET:**

TOTAL SCORE: 155 **SEE ATTACHMENT 13**

28. **DEQ PLANNING COMMENTS RECEIVED ON DRAFT PERMIT:** Document any comments received from DEQ planning.

The discharge is not addressed in any planning document but will be included when the plan is updated.

29. **PUBLIC PARTICIPATION:** Document comments/responses received during the public participation process. If comments/responses provided, especially if they result in changes to the permit, place in the attachment.

VDH/DSS COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the Virginia Dept. of Health and the Div. of Shellfish Sanitation and noted how resolved.

The VDH reviewed the application and waived their right to comment and/or object on the adequacy of the draft permit.

The DSS has no comments on the application/draft permit.

EPA COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from the U.S. Environmental Protection Agency and noted how resolved.

EPA waived the right to comment and/or object to the adequacy of the draft permit.

OR

EPA has no objections to the adequacy of the draft permit.

OR

By letter dated _____, the EPA provided the following comments:

ADJACENT STATE COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from an adjacent state and noted how resolved.

Not Applicable.

OTHER AGENCY COMMENTS RECEIVED ON DRAFT PERMIT: Document any comments received from any other agencies (e.g., VIMS, VMRC, DGIF, etc.) and noted how resolved.

Not Applicable.

OTHER COMMENTS RECEIVED FROM RIPARIAN OWNERS/CITIZENS ON DRAFT PERMIT: Document any comments received from other sources and note how resolved.

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation, and no comments were received.

OR

The application and draft permit have received public notice in accordance with the VPDES Permit Regulation. Section 9 VAC 35-31-310 of the VPDES Permit Regulation states, in part, "The Board shall hold a public hearing whenever it finds, on the basis of requests, a significant degree of public interest in a draft permit(s)."

DESCRIBE PN COMMENTS AND RESOLUTIONS. PROVIDE PUBLIC HEARING DATE AND REFERENCE BACKGROUND MEMORANDUM, IF APPROPRIATE.

PUBLIC NOTICE INFORMATION: Comment Period: Start Date
End Date

Persons may comment in writing or by e-mail to the DEQ on the proposed issuance/reissuance/modification of the permit within 30 days from the date of the first notice. Address all comments to the contact person listed below. Written or e-mail comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The Director of the DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requestor's interests would be directly and adversely affected by the proposed permit action.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Melinda Woodruff at: Department of Environmental Quality (DEQ), Tidewater Regional Office, 5636 Southern Boulevard, Virginia Beach, VA 23462. Telephone: 757-518-2174 E-mail: Melinda.Woodruff@deq.virginia.gov

Following the comment period, the Board will make a determination regarding the proposed issuance/reissuance/modification. This determination will become effective, unless the Director grants a public hearing. Due notice of any public hearing will be given.

30. **ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:**

ATTACHMENT 1

SITE INSPECTION REPORT/MEMORANDUM

Facility:	WESTERN REFINING YORKTOWN, INC.
County/city:	YORK COUNTRY

VPDES NO.	VA0003018

DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTEWATER FACILITY
INSPECTION REPORT
PART 1

Inspection date:	**September 30, 2009**	Date form completed:	**October 2, 2009**
Inspection by:	**Clyde Gantt**	Inspection agency:	**DEQ/TRO**
Time spent:	8 Hours	Announced Inspection:	[X] Yes [ ] No
Reviewed by: **Kenneth T. Raum**		Photographs taken at site?	[ ] Yes [X] No
Present at inspection:	**Jane Kelley – Environmental Mgr (757) 898-9732, James Maguire – Technical Mgr.**		

FACILITY TYPE:	FACILITY CLASS:
( ) Municipal	(X) Major
(X) Industrial	( ) Minor
( ) Federal	( ) Small
( ) VPA/NDC	( ) High Priority ( ) Low Priority

TYPE OF INSPECTION:

Routine	X	Reinspection		Compliance/assistance/complaint	

Date of previous inspection:	**May 10, 2007**	Agency:	**DEQ/TRO**

Population Served:		Connections Served:	

Last Month Average: Influent	BOD_5 (mg/l)		TSS (mg/l)		Flow (MGD)			
	Other:							
Last Month Average: Outfall 101 Effluent August, 2009	BOD_5 (lbs/d)	**62.4**	TSS (lbs/d)	**147.4**	Flow (MGD)	**1.43**	NH_3 (lbs/d)	**5.04**
	Other: **TOC – 419 lbs/d, Phenols – 0.1 lbs/d**							
Last Quarter Average: Outfall 101 Effluent June – August, 2009	BOD_5 (lbs/d)	**66.4**	TSS (lbs/d)	**169**	Flow (MGD)	**1.27**	NH_3 (lbs/d)	**29.3**
	Other: **TOC – 355 lbs/d, Phenols - .15 lbs/d**							

Data verified in preface:	Updated?		NO CHANGES?	**X**
Has there been any new construction?	YES		NO	**X**
If yes, were the plans and specifications approved?	YES		NO	**X**
DEQ approval date:				

COPIES TO: (X) DEQ/TRO; (X) DEQ/OWCP; (X) OWNER; (X) OPERATOR; (X) EPA-Region III; ( ) Other:

FACILITY: Western Refining Yorktown **VA0003018**

PLANT OPERATION AND MAINTENANCE																
1.	Class/number of licensed operators:	I	**1**	II		III		IV		Trainee						
2.	Hours per day plant manned?	**24 Hrs Day**														
3.	Describe adequacy of staffing	GOOD		AVERAGE	**X**	POOR										
4.	Does the plant have an established program for training personnel	YES	**X**	NO												
5.	Describe the adequacy of training	GOOD		AVERAGE	**X**	POOR										
6.	Are preventative maintenance tasks scheduled	YES	**X**	NO												
7.	Describe the adequacy of maintenance	GOOD		AVERAGE	**X**	POOR										
8.	Does the plant experience any organic/hydraulic overloading?	YES		NO	**X**											
	If yes, identify cause/impact on plant															
9.	Any bypassing since last inspection?	YES		NO	**X**											
10.	Is the standby electrical generator operational?	YES	**X**	NO		NA										
11.	How often is the standby generator exercised?	**Weekly (Wed. @ Noon)**														
	Power transfer switch?	**Yes**		ALARM SYSTEM?	**Yes**											
12.	When was the cross connection last tested on the potable supply?	**8/1/09**														
13.	Is the STP alarm system operational?	YES	**X**	NO		NA										
14.	Is sludge disposed in accordance with an approved SMP	YES	**X**	NO		NA										
15.	Is septage received by the facility?	YES		NO	**X**											
	Is septage loading controlled?	YES		NO		NA	**X**									
	Are records maintained?	YES		NO		NA	**X**									

OVERALL APPEARANCE OF FACILITY	GOOD		AVERAGE	**X**	POOR	

COMMENTS:	**The facility is generally clean. Operator licenses kept at training office and not viewed except the one noted.**

PLANT RECORDS

	WHICH OF THE FOLLOWING RECORDS DOES THE PLANT MAINTAIN?							
	Operational logs for each process unit	YES	X	NO		NA	
	Instrument maintenance and calibration	YES	X	NO		NA	
	Mechanical equipment maintenance	YES	X	NO		NA	
1.	Industrial waste contribution (municipal facilities)	YES		NO		NA	X

	WHAT DOES THE OPERATIONAL LOG CONTAIN					
	Visual Observations	X	Flow Measurement	X	Laboratory Results	X
2.	Process Adjustments	X	Control Calculations		Other?	

COMMENTS:

	WHAT DO THE MECHANICAL EQUIPMENT RECORDS CONTAIN?				NA	
	MFG. Instructions	X	As Built Plans/specs	X	Spare Parts Inventory	X
3.	Lube Schedules	X	Other?		Equipment/parts Suppliers	X

COMMENTS:

	WHAT DO INDUSTRIAL WASTE CONTRIBUTION RECORDS CONTAIN? (MUNICIPAL)			NA	X
	Waste Characteristics		Impact on Plant		
4.	Location and Discharge Types		Other?		

COMMENTS:

	WHICH OF THE FOLLOWING RECORDS ARE AT THE PLANT & AVAILABLE TO PERSONNEL?					NA	
	Equipment Maintenance Records	X	Industrial Contributor Records				
5.	Operational Log	X	Sampling/testing Records	X	Instrumentation Records		X

6.	Records not normally available to personnel at their location:	**Records kept at various "shops" on the facility.**				
7.	Were the records reviewed during the inspection	YES	X	NO		
8.	Are records adequate and the O&M manual current?	YES	X	NO		
9.	Are the records maintained for the required 3-year time period	YES	X	NO		

COMMENTS:

FACILITY: Western Refining Yorktown **VA0003018**

SAMPLING									
1.	Are sampling locations capable of providing representative samples?					YES	X	NO	
2.	Do sample types correspond to VPDES permit requirements?					YES	X	NO	
3.	Do sampling frequencies correspond to VPDES permit requirements?					YES	X	NO	
4.	Does plant maintain required records of sampling?					YES	X	NO	
5.	Are composite samples collected in proportion to flow?	YES	X	NO		NA			
6.	Are composite samples refrigerated during collection?	YES	X	NO		NA			
7.	Does the plant run operational control tests?	YES	X	NO		NA			

COMMENTS:

TESTING										
1.	Who performs the testing?	Plant	X	Central Lab	X	Commercial Lab		X		
	Name: **J.R. Reed Labs performs analysis for TOC and Total Cr.**									
IF THE PLANT PERFORMS ANY TESTING, PLEASE COMPLETE QUESTIONS 2-4										
2.	Which total residual chlorine method is used?	**DPD/FAS**								
3.	Does plant appear to have sufficient equipment to perform required tests?					YES	X	NO		
4.	Does testing equipment appear to be clean and/or operable?					YES	X	NO		

COMMENTS:

FOR INDUSTRIAL FACILITIES WITH TECHNOLOGY BASED LIMITS ONLY								
1.	Is the production process as described in permit application? If no, describe changes in comments section.	YES	X	NO		NA		
2.	Are products/production rates as described in the permit application? If no list differences in comments section.	YES	X	NO		NA		
3.	Has the Agency been notified of the changes and their impact on plant effluent? Date agency notified:	YES		NO		NA	X	

COMMENTS: **Outfall 101 has limits based on Federal Effluent Guidelines (BAT & BPT). The WWTP conducts some operational testing. All VPDES sampling and analysis, except TOC and Total Chrome, are performed by the facility laboratory.**

PROBLEMS IDENTIFIED AT LAST INSPECTION:		CORRECTED	NOT CORRECTED
1.	None		

SUMMARY

INSPECTION COMMENTS:

1.	The Stormwater Pollution Prevention Plan (SWPPP) was quickly reviewed on site and no problems were noted. However, in subsequent discussions with TRO staff, the plan may not be up to date. There are RCRA Corrective Action Management Units (CAMUs) on site. These units are for management of remediated wastes across the facility. This includes the previous wastewater treatment ponds. Stormwater runoff from these sites had not been addressed in the plan as of June, 2009. The plan should have been updated to reflect stormwater runoff during construction (exposed soils) and post remediation runoff. Additionally, the previous "Landfarm 10" just west of the WWTP is required to be dewatered and that discharges via outfall 002. This was addressed in Lisa Silvia's letter of June 19, 2009.
2.	Per Ms. Kelley, some documents such as the Sludge Management Plan (SMP) were being used to complete the permit application due in November and were not available for review.
3.	Some of the tank farm bermed areas were checked. All those viewed were dry and clean. One bermed tank area on the west side was used for tank bottoms and the soil is stained black. This area is to become a remediation site.
4.	There is a vehicle/equipment wash site on the north side of the facility. This is a contained concrete pad with a closed loop washwater system. Oil is recovered as needed.
5.	Inspected the Cracking and Coking areas. All plant areas are on a contained concrete pad and stormwater is routed to the treatment plant. The coking area has a closed loop system for water used to cut the coke. Stormwater from the coke yard is reused in the system. Some portions of the coke storage yard are not contained. Stormwater from this area flows through sedimentation ponds (not viewed) with eventual discharge via outfall 002.
6.	Herbicides are used along the facility pipelines and probably in the tank bermed areas.
7.	Overall, the industrial areas appear contained with flows routed to the treatment plant. The non-industrial areas were generally clean. No problems were noted during the site inspection.

COMPLIANCE RECOMMENDATIONS FOR ACTION:

1.	Ensure that the SWPPP is accurate and all potential stormwater contamination is addressed. Additionally, please ensure that all RCRA activities are addressed in the VPDES Permit application as needed.
2.	Please ensure that all required documentation is available for review upon request. This includes the SWPPP and associated inspections and evaluations, maintenance and instrumentation records, operator licensing, and laboratory records.

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
LABORATORY INSPECTION REPORT

10/01

FACILITY NO:	INSPECTION DATE:	PREVIOUS INSP. DATE:	PREVIOUS EVALUATION:	TIME SPENT:
VA0003018	September 30, 2009	May 10, 2007	D	9 Hours

NAME/ADDRESS OF FACILITY:

Western Refining Yorktown, Inc.
2201 Goodwin Neck Road
Grafton, VA 23692

Previously: Giant Yorktown Refinery

FACILITY CLASS:

(X) MAJOR
( ) MINOR
( ) SMALL
( ) HIGH PRIORITY
( ) LOW PRIORITY

FACILITY TYPE:

( ) MUNICIPAL
(X) INDUSTRIAL
( ) FEDERAL
( ) COMMERCIAL LAB
( ) VPA/NDC

UNANNOUNCED INSPECTION?
( ) YES
(X) NO

FY-SCHEDULED INSPECTION?
(X) YES
( ) NO

INSPECTOR(S):
Clyde Gantt

REVIEWERS:
Kenneth T. Raum

PRESENT AT INSPECTION:
Wanda Stevens – Lab Sup. (757) 898-9731
Jane Kelley – Env. Mgr.

LABORATORY EVALUATION	DEFICIENCIES? Yes	No
LABORATORY RECORDS	X	
GENERAL SAMPLING & ANALYSIS		X
LABORATORY EQUIPMENT		X
TEMPERATURE ANALYSIS PROCEDURES		X
pH ANALYSIS PROCEDURES	X	
TOTAL RESIDUAL CHLORINE ANALYSIS PROCEDURES		X

QUALITY ASSURANCE/QUALITY CONTROL

Y/N	QUALITY ASSURANCE METHOD	PARAMETERS	FREQUENCY
	REPLICATE SAMPLES		
	SPIKED SAMPLES		
X	STANDARD SAMPLES		Weekly
	SPLIT SAMPLES		
X	SAMPLE BLANKS		Weekly
	OTHER		
X	EPA-DMR QA DATA?	RATING: (X) No Deficiency ( ) Deficiency (X) NA	

X	**QC SAMPLES PROVIDED?**	**RATING:** (X) No Deficiency ( ) Deficiency (X) NA

COPIES TO: (X) DEQ/TRO; (X) DEQ/OWCP; (X) OWNER; (X) EPA-Region III; ( ) Other:

Memo

To: File

From: Melinda Woodruff

Date: January 4, 2010

Re: Western Refining Yorktown, Inc.

VPDES No. 0003018

On December 21, 2009, Mark Sauer and I performed a site visit at Western Refining Yorktown, Inc. for the reissuance of the major industrial wastewater discharge VPDES permit no. VA0003018. The Environmental Manager, Jane Kelley, was representing the facility owner and Keith Gentry from Operations and Tom Numbers from Environmental Resource Management were also in attendance. The VPDES permit applies to the storm water and wastewater associated with the operations of a petroleum refining facility.

The site is located at 2201 Godwin Neck Road in Yorktown, on the York River. The facility discharges storm water runoff and process wastewaters. The basic contributions to the outfalls are as follows: Outfall 001 is a final discharge comprised of two separate internal discharges (101 and 102) of once-thru cooling water, treated process and sanitary wastewaters and reject from Reverse Osmosis water treatment activities. Outfall 002 consists of storm water runoff from areas outside of product storage, movement and/or processing locations. In addition, negligible quantities of one-through cooling waters to maintain flow through storm water basin and if not diverted to treatment prior to outfall 001, hydrostatic test water from outfall 201 may be a contributing flow. Outfall 004 discharges from the fire line flushing and freeze protection at the pier. The above ground sewer consists of stormwater associated with process wastewater and the below ground sewer handles the tank areas or ditch systems with dual valves.

When we arrived we discussed the application for reissuance. In the cover letter Western Refining had made several requests which we discussed, here is a breakdown of our discussions:
Outfall 101 Classification: agreed, 101 is a process wastewater outfall.
Outfall 102 Diversions to Outfall 002: this may continue. No notification required we requested they document in house.
Nutrient Enriched Water Reopener: no, facility must maintain separate general permit because the general permit is a separate regulation.
Sampling Data Clarifications: 1) The facility is investigating the sources of radioactive materials; we referred them to the owners of the source waters for possible information.
2) The facility will resubmit the sampling data for corrections on the "believed to be present" check boxes. Outfall 004 consists mainly of freeze-protection water, which consists solely of a combination of non-contact Hampton Roads Sanitation (HRSD) recycle water and/or water from the City of Newport News. In the application Form 12C-Item IIA-B, Water Flow Schematic Boilers, shows an arrow indicating the HRSD reuse water is part of the RO Unit Reject and Filter Backwash wastewater which could flow to Outfall 001 or 002 then onto the Raw Water Tank used for the fire water and cooling water system. We asked for clarification on this because during this issuance we will be adding fecal coliform and enterococci testing

on the outfalls which these parameters apply. The facility will inform us of the changes to the flow chart if any.
3) The facility will be providing corrected sampling data sheets.

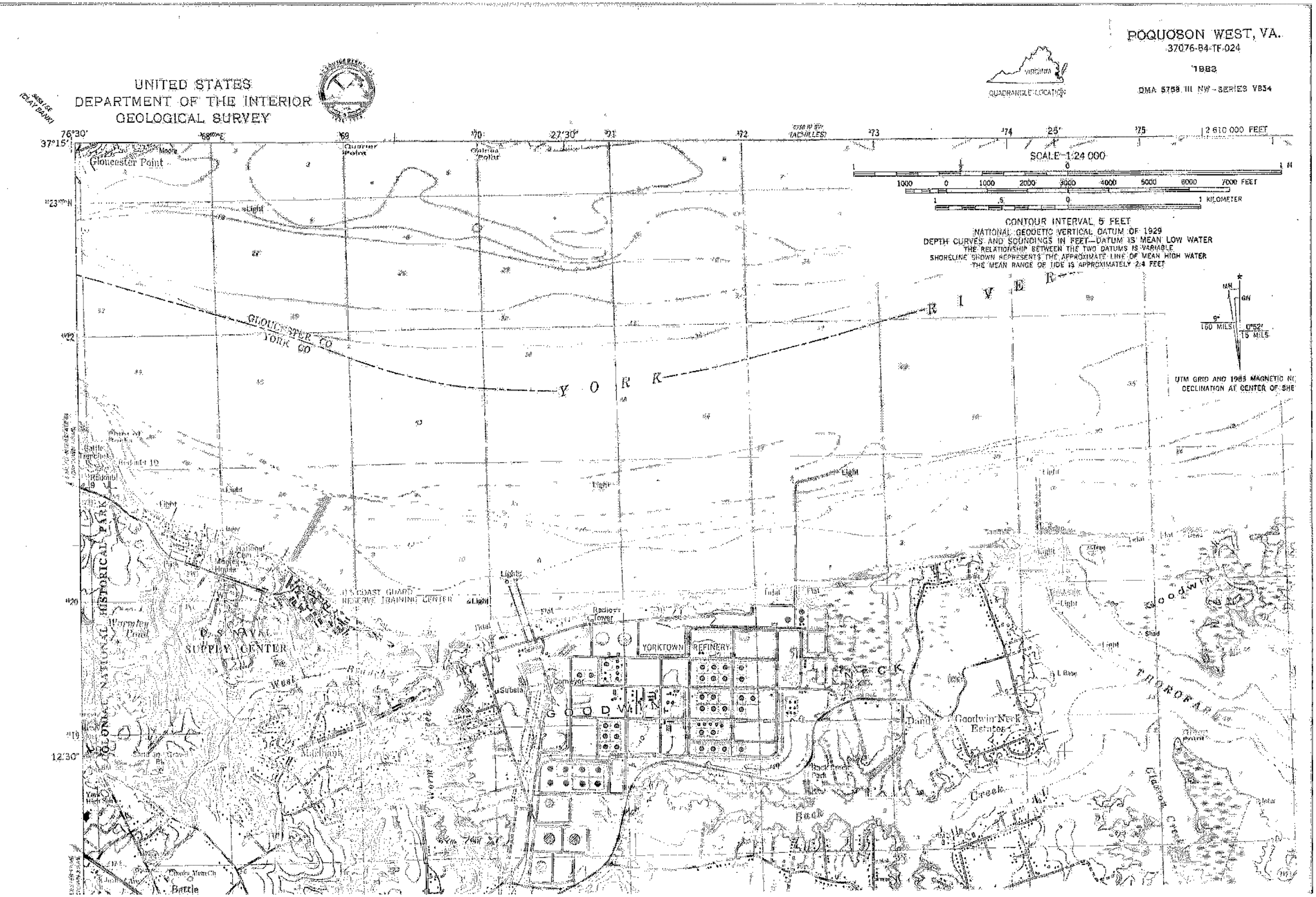
We requested information from the facility as well:
1) During the 2005 reissuance of the permit, a new sour water stripper was projected to be installed; this was added in the spring of 2007.
2) We requested more specific breakdown of the process capacities. In order to develop the factors associated with facility size and its process configuration, more detail is needed for this permit reissuance.
3) In reviewing the data submitted with the applications besides what has already been discussed, Outfall 102 had a 500 Mpn/100 mL value for fecal coliform. We requested an explanation of this. The facility discussed resampling the outfall.
4) We confirmed there is no transfer of bilge, ballast and other potentially contaminated wastewater flow from vessels loading and/or offloading products to the facility for treatment.
5) We requested updated raw, source, and storm water data, Figure 1 Water Flow Schematic.
6) We requested an updated site topographic map with the Outfalls marked in proper locations which were provided during the site visit.

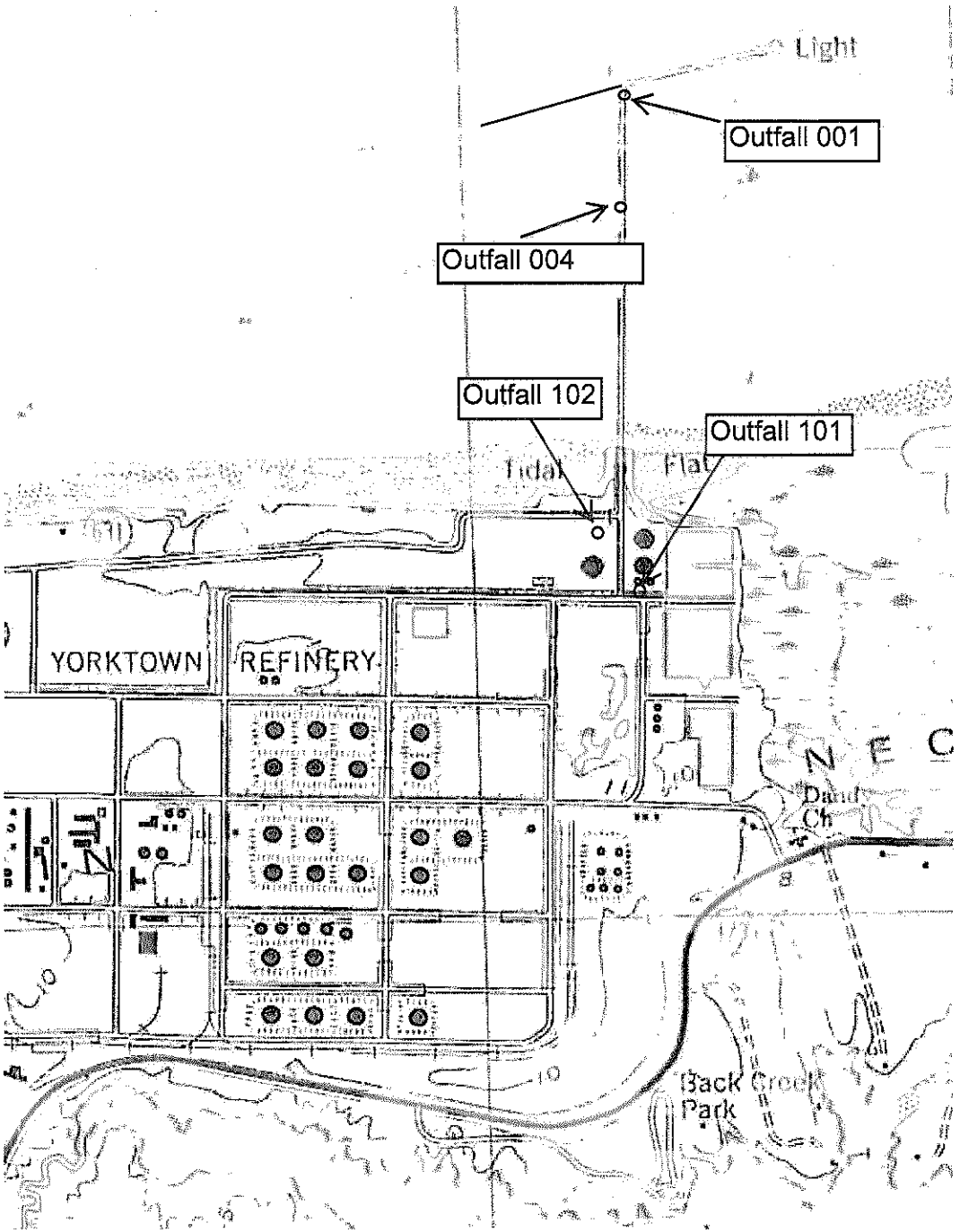
We provided copies of emails and the schematics from above with our requested information. In addition a copy of the 2005 fact sheet was emailed to Ms. Kelley on January 5, 2010.

After our discussions, we toured the facility. We went through the process areas and the aboveground storage tank areas. We went to the wastewater treatment area and finally to each outfall. The facility appeared in good condition.

ATTACHMENT 2

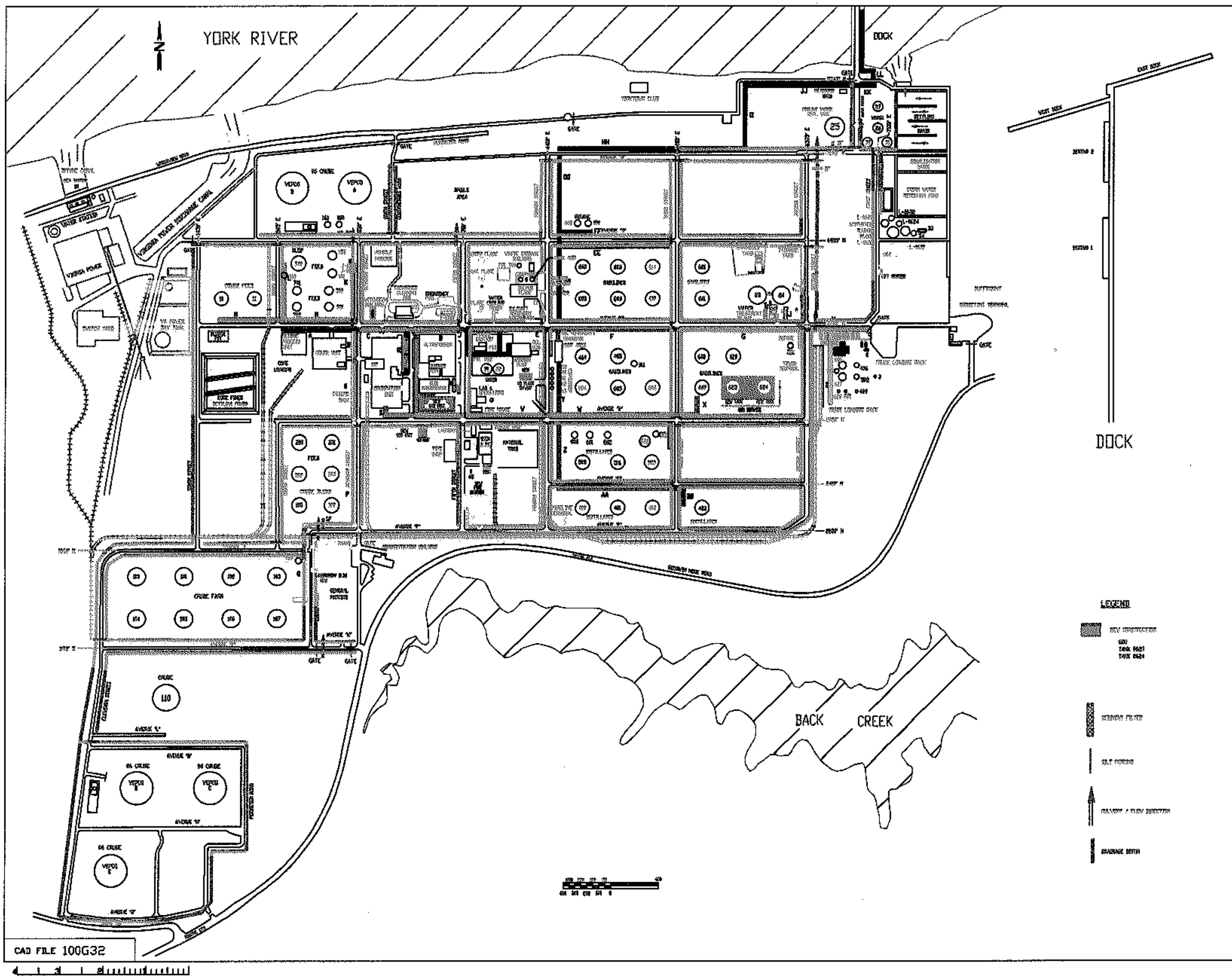
DISCHARGE LOCATION/TOPOGRAPHIC MAP


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
POQUOSON WEST, VA.
37076-B4-TF-024
1983
DMA 5758 III NW—SERIES V834
QUADRANGLE LOCATION
VIRGINIA
SCALE 1:24 000
1 KILOMETER
7000 FEET
CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES AND SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE MEAN RANGE OF TIDE IS APPROXIMATELY 2.4 FEET
UTM GRID AND 1983 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET
160 MILS
15 MILS
Gloucester Point
YORK RIVER
GLOUCESTER CO
YORK CO
U S COAST GUARD
RESERVE TRAINING CENTER
U S NAVAL
SUPPLY CENTER
COLONIAL NATIONAL HISTORICAL PARK
YORKTOWN REFINERY
GOODWIN NECK
Goodwin Neck Estates
THOROFARE
Back Creek
Radio Tower
Conveyor
Battle


Light
Outfall 001
Outfall 004
Outfall 102
Outfall 101
YORKTOWN
REFINERY
Back Creek
Park

ATTACHMENT 3

SCHEMATIC/PLANS & SPECS/SITE MAP/ WATER BALANCE



NO.	DESCRIPTION	BY
0	INITIAL DRAWING RELEASE 12/7/95	RHO
1	ALTERED CORRECTED SCALE WAS 1"-30' 3/30/99	RHO
2	ALTERED ASBUILT UP DATE 5/22/01	RHO
3	UPDATE FOR CLARITY 1/1/03	TDV
4	ADDED VIRGINIA POWER 4/11/03	RHO
5	ALTERED ASBUILT UP DATE CLEANING SLAB & TRUCK RACK 11/15/03	RHO
6	ALTERED ASBUILT UP DATE GAS TREATING UNIT & FLARE AREA 3/5/04	RHO
7	ADDED CLEAN FUEL PLANTS 10/22/04	RHO
	ALTERED UP DATE 3/25/05	RHO
8	ADDED DECANT TANKS 918-913 6/25/05	LCN
9	ADDED S-ZORB UNIT AND TANKS 623 & 624 6/6/06	RHO
10	ALTERED RELOCATED TANKS 407 & 408, 400 RENAMED 585 6/30/06	LFN
11	ALTERED UP DATE S-ZORB UNIT AND TANKS 623 & 624 11/2/06	RHO
12	S-ZORB UNIT RENAMED GDU UNIT	TDV
13	ADDED NEW HR UNIT 5/11/06	RHO
14	ADDED TEMPORARY FIRE STATION 7/2/07	RHO
15	ADDED GRAVEL YARD ON AVE "F" 7/25/07	RHO
16	ADDED LABORATORY, FIRE STATION & LIFT STA TION 10/25/07	RHO
17	ADDED STREET COORDINATES 6/26/08	JHK

100-G-46 MAP FOR FUTURE EXPANSION

AMOCO OIL COMPANY

WESTERN REFINING - YORKTOWN
REFINERY PLOT PLAN
AND MAP

DATE 12/7/95

CAD/DESIGNER RHOwen

SCALE 1"=360'

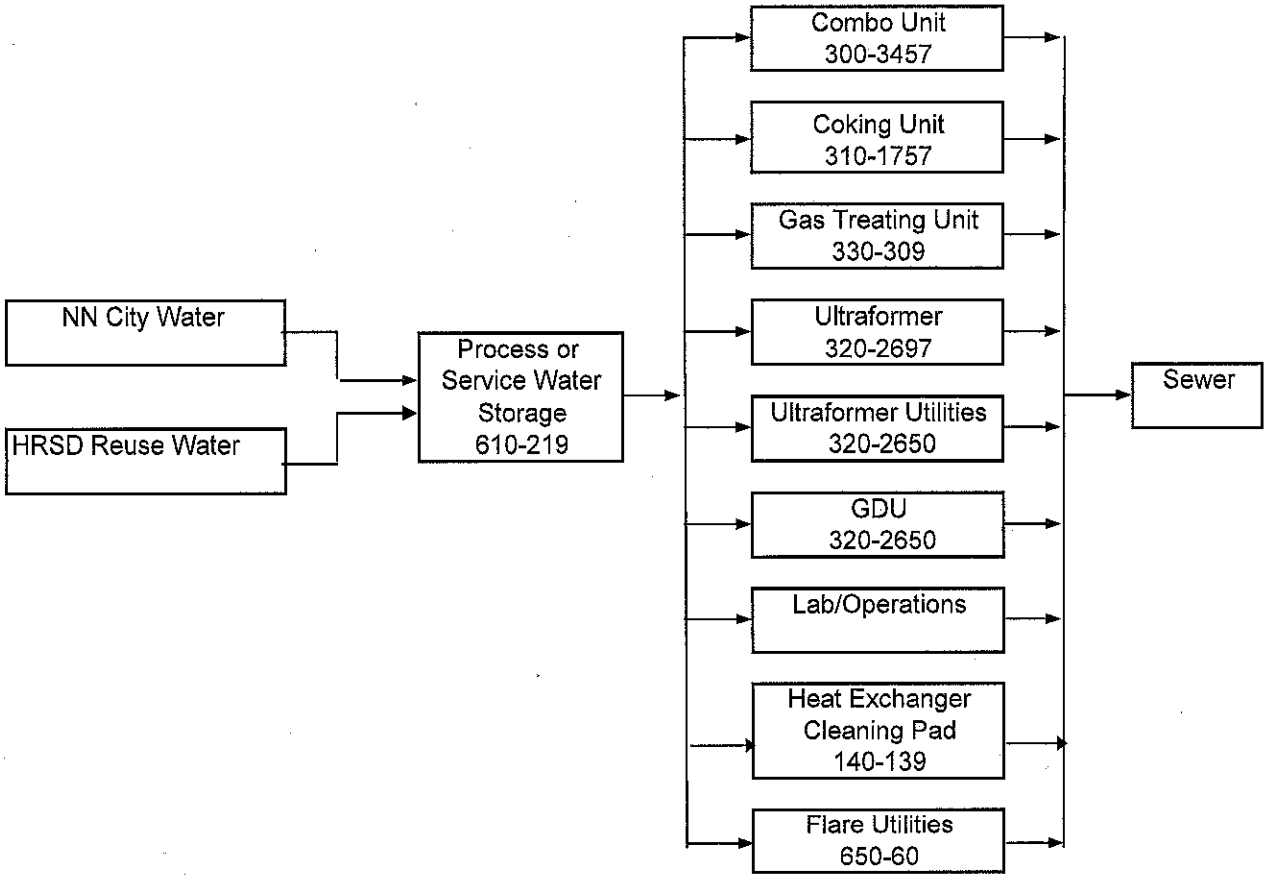
B-100-G-32

REV. 17

PLOTTING SCALE 1=4320

NOTIFY ENGINEERING OF ALL CHANGES

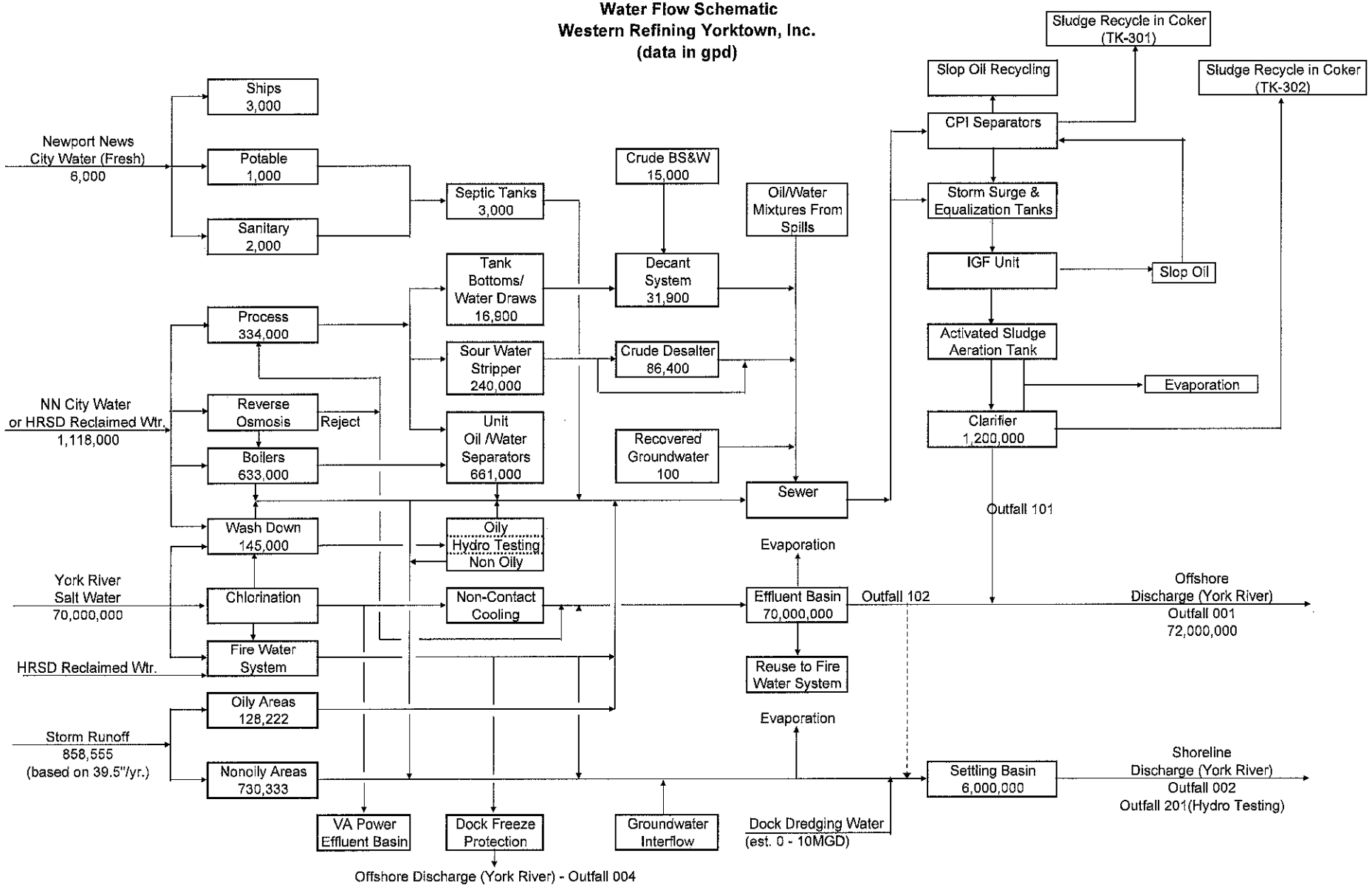
EPA Form 2C - Item IIA-B
Water Flow Schematic
Process Summary
Western Refining Yorktown, Inc.



See following figures for more detail of water flow.

Note: Hyphenated numbers are references to Western Refining Yorktown, Inc. piping and instrument diagrams.

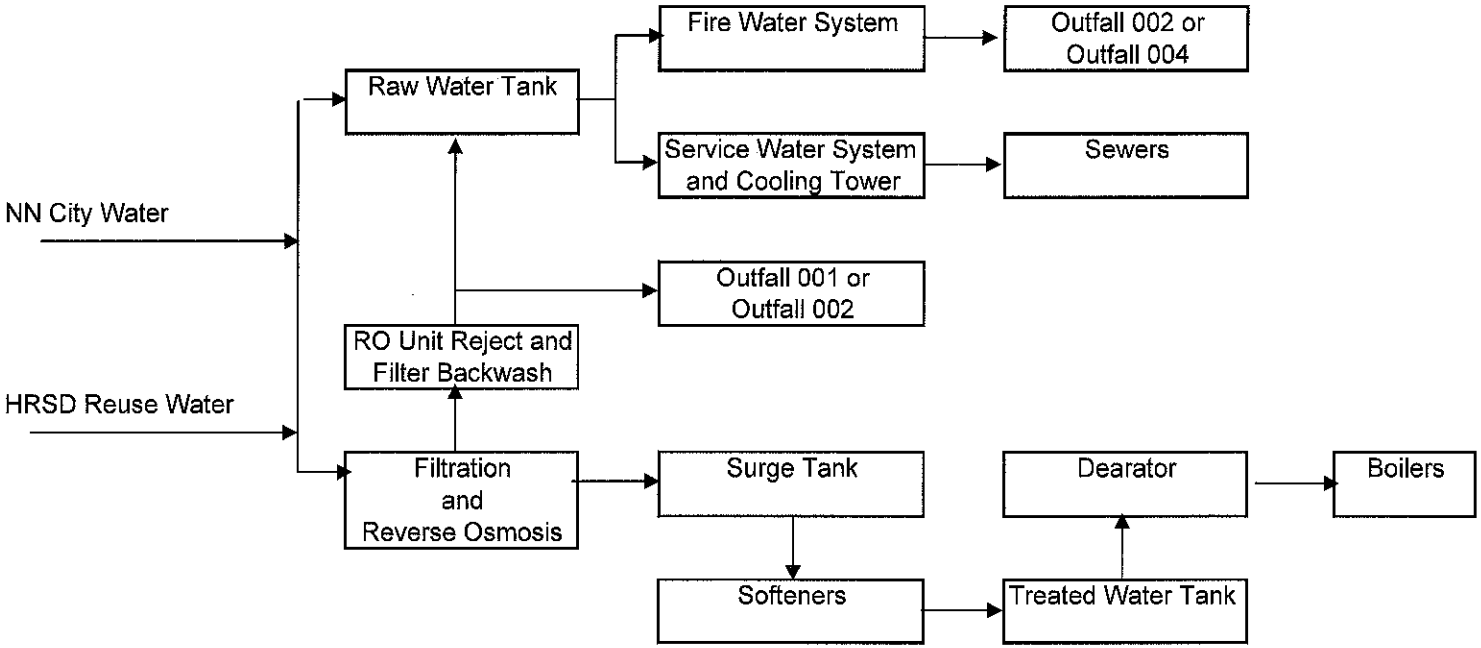
Figure 1
Water Flow Schematic
Western Refining Yorktown, Inc.
(data in gpd)



* See additional drawings for more detail.

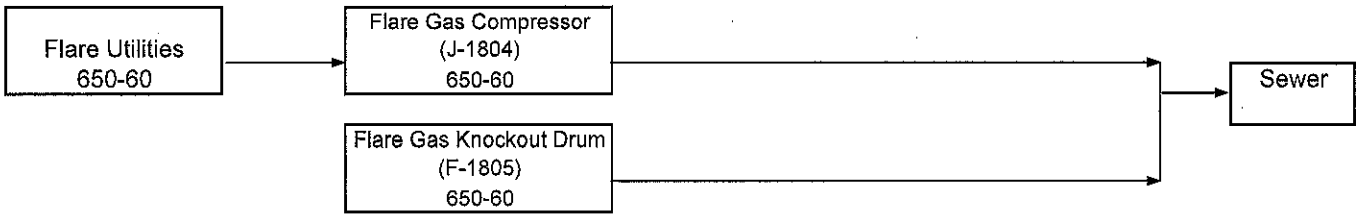
11/16/2009

EPA Form 2C - Item IIA-B
Water Flow Schematic
Boilers
Western Refining Yorktown, Inc.



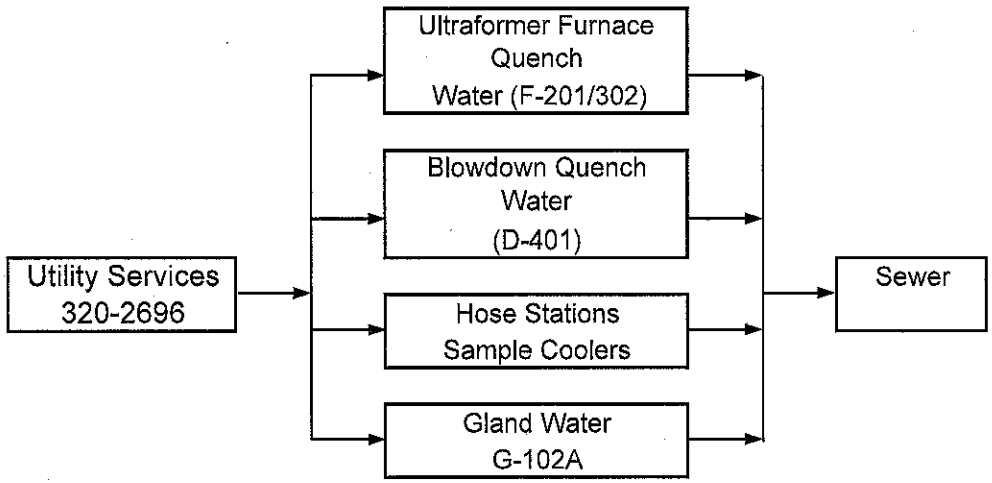
11/16/2009

EPA Form 2C - Item IIA-B
Water Flow Schematic
Flare Utilities
Western Refining Yorktown, Inc.



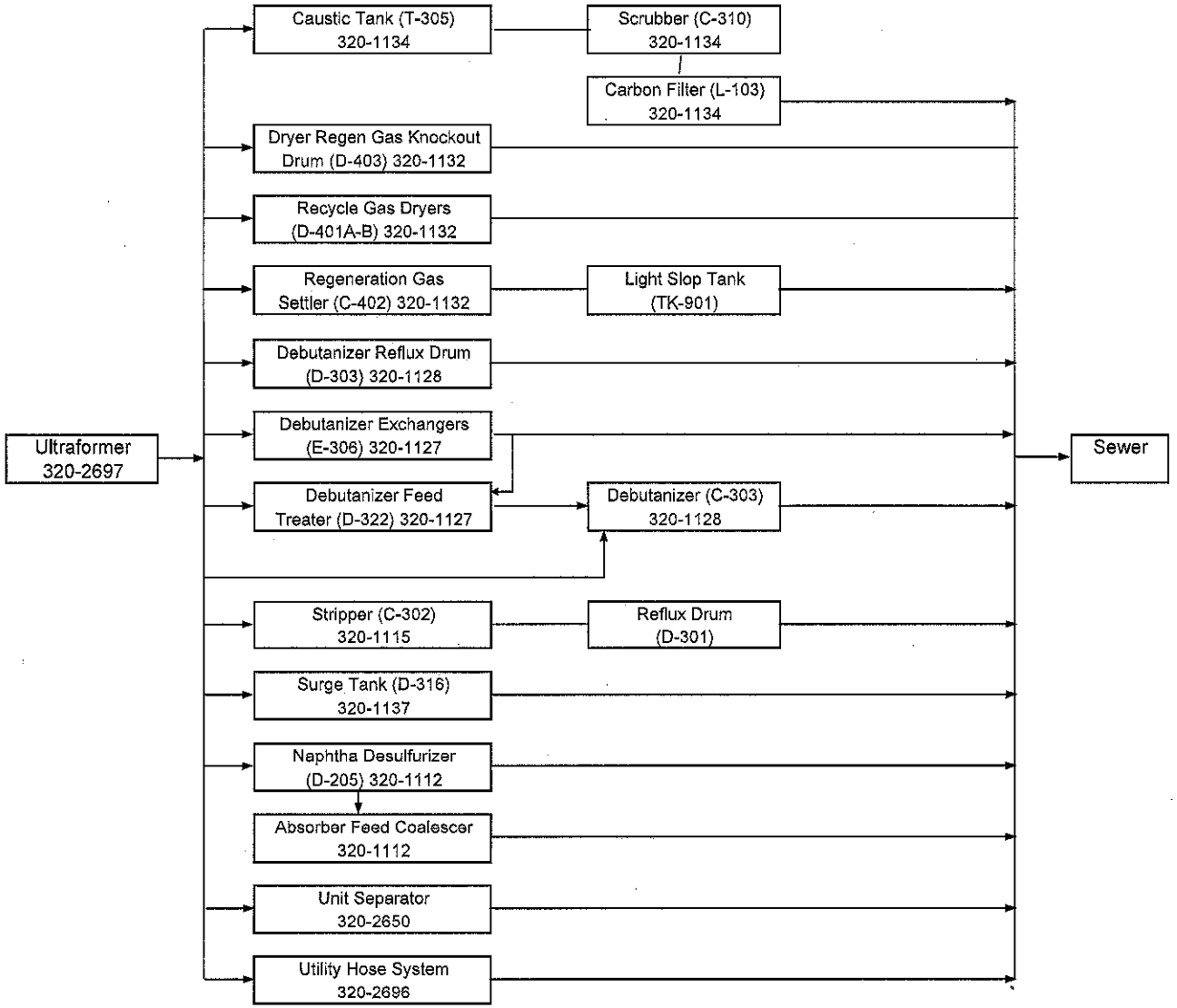
Note: Numbers in parentheses are equipment identification numbers. Hyphenated numbers are references to Western Refining Yorktown, Inc. piping and instrument diagrams.

EPA Form 2C - Item IIA-B
Water Flow Schematic
Ultraformer Utilities
Western Refining Yorktown, Inc.



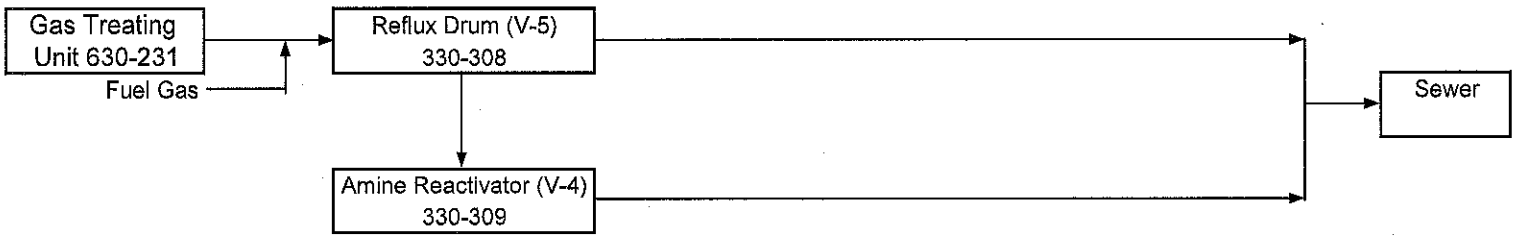
Note: Numbers in parentheses are equipment identification numbers. Hyphenated numbers are references to Western Refining Yorktown, Inc. piping and instrument diagrams.

EPA Form 2C - Item IIA-B
Water Flow Schematic
Ultraformer
Western Refining Yorktown, Inc.



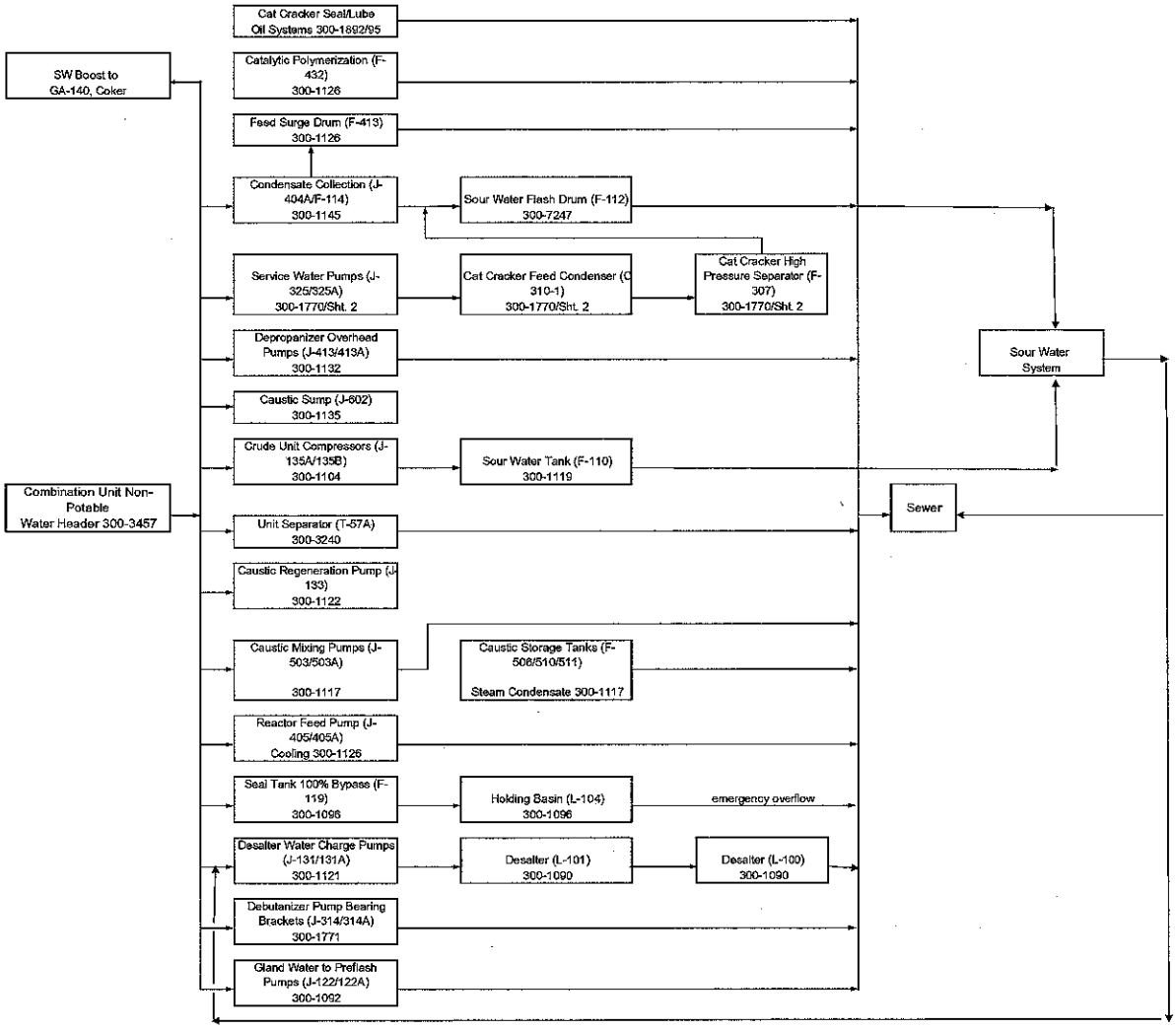
Note: Numbers in parentheses are equipment identification numbers. Hyphenated numbers are references to Western Refining Yorktown, Inc. piping and instrument diagrams.

EPA Form 2C - Items IIA-B
Water Flow Schematic
Gas Treating Unit
Western Refining Yorktown, Inc.



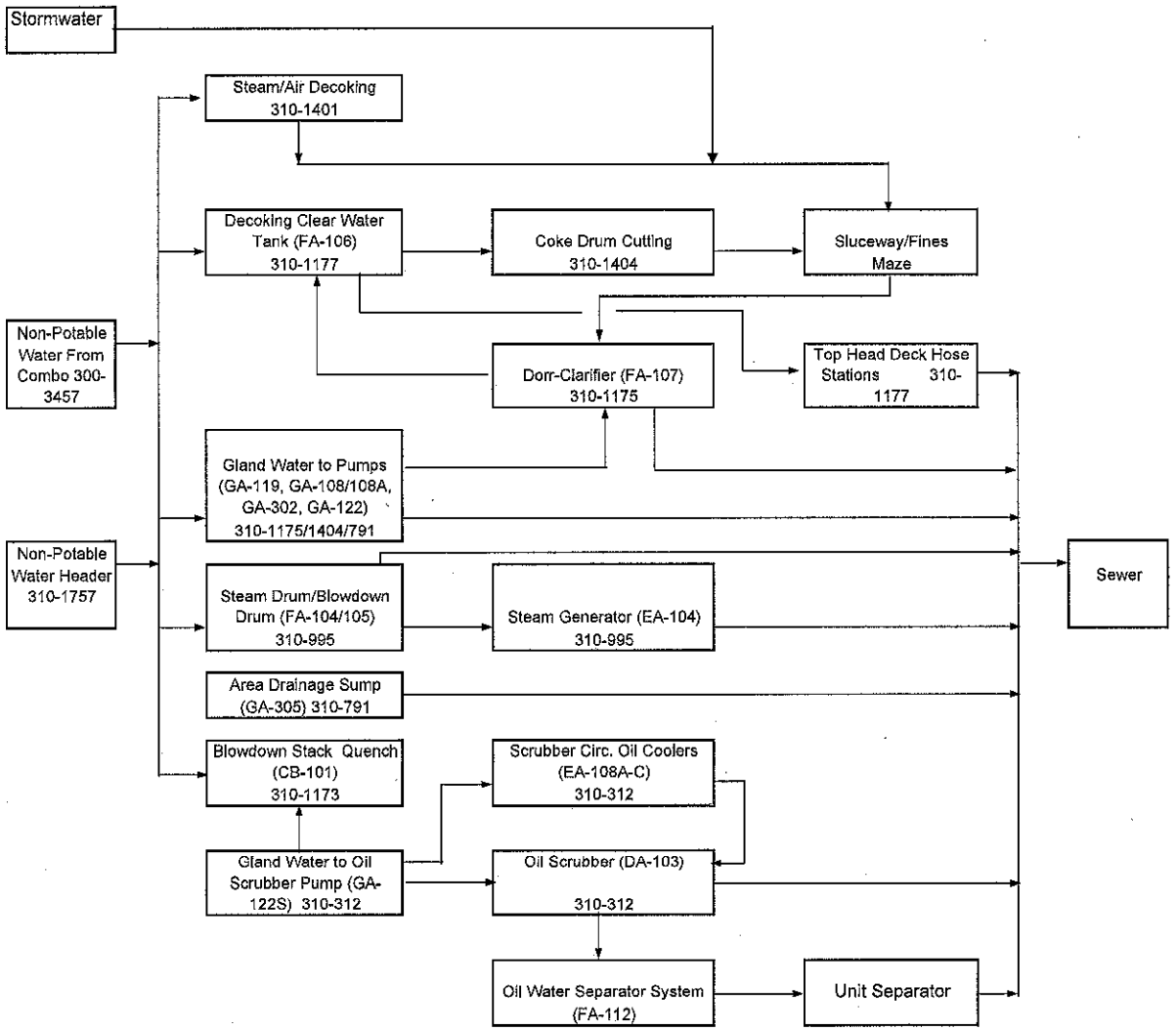
Note: Numbers in parentheses are equipment identification numbers. Hyphenated numbers are references to Western Refining Yorktown, Inc. piping and instrument diagrams.

EPA Form 2C - Items IIA-B
Water Flow Schematic
Combination Unit
Western Refining Yorktown, Inc.



Note: Numbers in parentheses are equipment identification numbers. Hyphenated numbers are references to Western Refining Yorktown, Inc. piping and instrument diagrams.

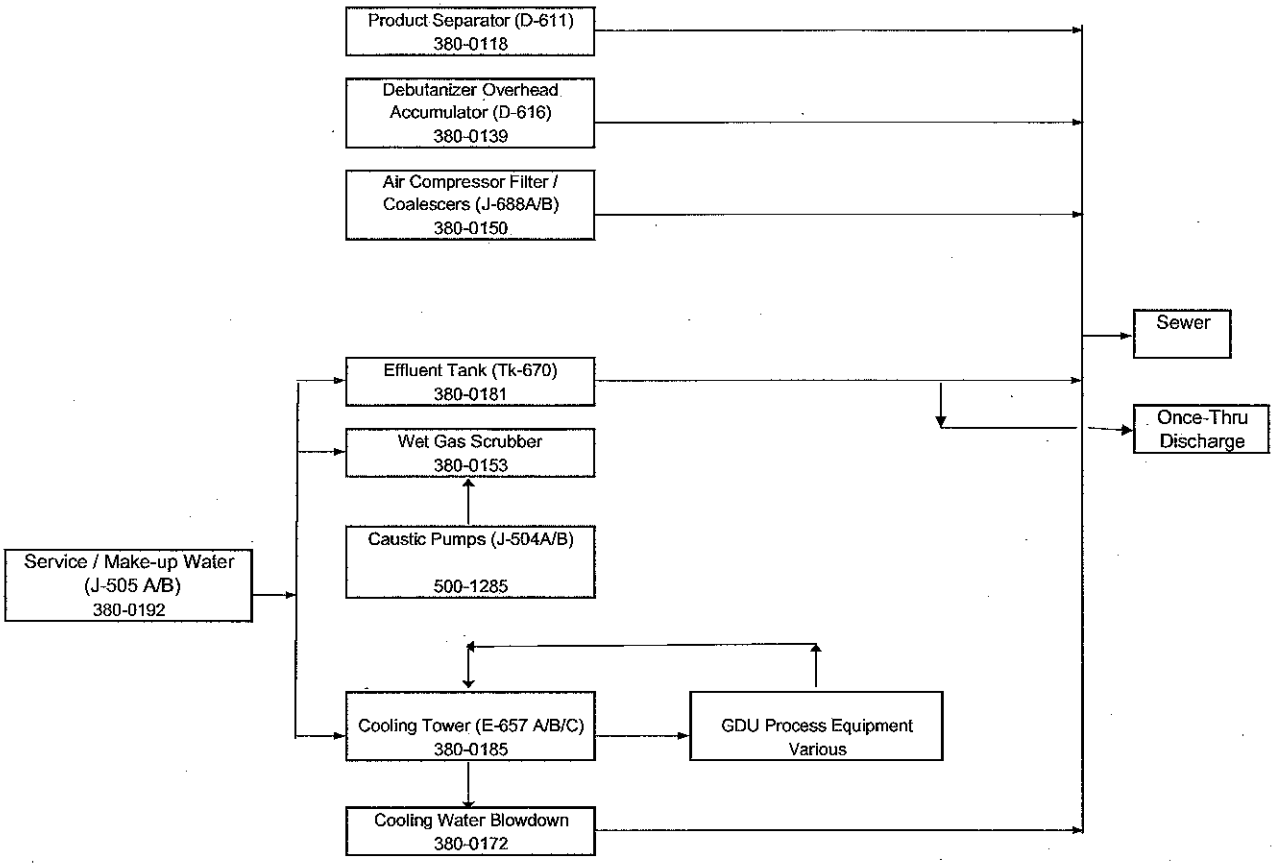
EPA Form 2C - Items II.A-B
Water Flow Schematic
Coking Unit
Western Refining Yorktown, Inc.



Note: Numbers in parentheses are equipment identification numbers. Hyphenated numbers are references to Western Refining Yorktown, Inc. piping and instrument diagrams.

11/16/2009

EPA Form 2C - Items IIA-B
Water Flow Schematic
Gasoline Desulfurizing Unit (GDU)
Western Refining Yorktown, Inc.



Note: Numbers in parentheses are equipment identification numbers. Hyphenated numbers are references to Western Refining Yorktown, Inc. piping and instrument diagrams.

ATTACHMENT 4

TABLE I - DISCHARGE/OUTFALL DESCRIPTION

TABLE I

NUMBER AND DESCRIPTION OF OUTFALLS

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (3)
001	37°13'36" 76°26'18"			72 MGD
101	Internal			1.243 MGD
102	Internal			70 MGD
002 201	37°13'05" 76°26'15"			6.2 MGD
004	37°13'36" 76°26'18"			0.01 MGD

(1) List operations contributing to flow; **See Form 2C-II.B Table Attached**
(2) Give brief description, unit by unit; **See Form 2C-II.B Table Attached**
(3) Give maximum 30-day average flow for industry and design flow for municipal

FORM 2C-II.B Table

1. OUTFALL	2. OPERATIONS CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION	b. AVERAGE FLOW	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
101	Sour process water	0.24 MGD	Ammonia stripping	1-A	
			Reuse, sewer	4-C	
			CPI separators	1-H	1-U
			Storage, equalization		
			Coagulation	2-D	
			Induced gas flotation	1-U	
			Activated sludge	3-A	
			Sedimentation	1-U	
			Discharge to surface water	4-A	
101	Sweet process water	0.50 MGD	Oil/water separators, sewer	1-H	1-U
			CPI separators	1-H	1-U
			Storage, equalization		
			Coagulation	2-D	
			Induced gas flotation	1-U	
			Activated sludge	3-A	
			Sedimentation	1-U	
			Discharge to surface water	4-A	
101	Stormwater in oily areas	0.50 MGD	Sewer		
			Screening	1-T	
			Storage, equalization		
			Coagulation	2-D	
			Induced gas flotation	1-U	
			Activated sludge	3-A	
			Sedimentation	1-U	
			Discharge to surface water	4-A	
101	Sanitary and gray water	0.003 MGD	Sedimentation	1-U	
			Sewer		
			Screening	1-T	
			Storage, equalization		
			Coagulation	2-D	
			Induced gas flotation	1-U	
			Activated sludge	3-A	
			Sedimentation	1-U	
			Discharge to surface water	4-A	
102	Once-through cooling water	70 MGD	Chlorine/ Bromide disinfection	2-F	
			Reuse	4-C	
			Discharge to surface water	4-A	
001	Combined process waste-water and once-through cooling water (Outfalls 101 and 102) and Reverse Osmosis Unit reject stream	72 MGD	Discharge to surface water	4-A	

FORM 2C-II.B Table

1. OUTFALL	2. OPERATIONS CONTRIBUTING FLOW		3. TREATMENT		
	a. OPERATION	b. AVERAGE FLOW	a. DESCRIPTION	b. LIST CODES FROM TABLE 2C-1	
002	Stormwater runoff and once-through cooling and/or process wastewater if diverted from Outfall 102 and/or firewater	6 MGD	Sedimentation Discharge to surface water	1-U 4-A	
004	Firewater flushing and freeze protection	0.01 MGD	Discharge to surface water	4-A	
201	Hydrostatic testing	0.2 MGD	Sedimentation Discharge to surface water	1-U 4-A	

EPA Form 2C-II.B.

Sour Water Stripper

Tank 700
Capacity: 40,000 barrels (approx.)
Maximum Throughput: 3,650,000 barrel/year

Tower V506
Diameter 4'6"
Avg. Flow 300 gpm or 420,000 gal/day

In most cases, sour water generated at the process units is initially transferred to degassing/ oil separator drums. Sour water from these individual drums throughout the refinery then flows to an equalization tank (tank 700) to provide additional oil/water separation and flow equalization. All sour water is treated at the Sour Water Stripper (V-506). Stripped sour water is either reused at the crude desalters or discharged into the refinery aboveground sewer system for further treatment prior to discharge through Outfall 101.

Heat Exchanger Cleaning Pad

2 ft high concrete curbing on all sides
6 ft high fabricated steel walls on three sides to control spray

On the heat exchanger cleaning pad, high pressure water streams are used to wash out exchangers and other equipment. Water and sludge mixtures from this process flow by gravity to a collection sump, which is then emptied to the sewer.

Decant Tanks

Tank 909
Low, Low Gauge: 4'6"
Low Gauge: 4'8"
Maximum working height: 22'2"
BBLS: 1500
BBLS Per Foot: 68.0

Tank 910
Low, Low Gauge: 4'6"
Low Gauge: 4'8"
Maximum working height: 15'6"
BBLS: 1000
BBLS Per Foot: 65.0

Tank 911
Low, Low Gauge: 4'6"
Low Gauge: 4'8"
Maximum working height: 22'2"
BBLS: 1500
BBLS Per Foot: 45.0

Tank 912

Low, Low Gauge: 4'6"
Low Gauge: 4'8"
Maximum working height: 15'6"
BBLS: 1000
BBLS Per Foot: 65.0

Tank 913

Low, Low Gauge: 4'0"
Low Gauge: 4'2"
Maximum working height: 8'0"
BBLS: 262
BBLS Per Foot: 33.0

Decant tanks receive tank bottoms or water draws and provide a means of (1) controlling air emissions from tank water draws/bottoms, and (2) achieving better separation between tank water draws/bottoms and free hydrocarbons associated with them. Water from the decant system is discharged into the aboveground sewer system; oil, the slop oil system.

Collection Systems

Process Unit Decks

Processing transfer, and storage areas such as the coke yard, process unit decks, and truck loading rack are paved, curbed as required, and provided with drainage to the aboveground or belowground sewer system, whichever is appropriate.

Sandblasting and Spraypainting Booth

A concrete pad with drainage to the belowground sewer system is provided for sandblasting and spraypainting of equipment.

Aboveground Sewer System

This sewer system runs west to east along the south side of Avenue C. It conveys hydrocarbon-containing process wastewater streams such as tank water draws via forced main to the Water Treatment Plant.

Belowground Sewer System and Junction Boxes

This sewer system conveys (1) non-hydrocarbon-containing process wastewater streams, (2) storm water from oily areas, and (3) potable and sanitary wastewater from septic tanks to the Water Treatment Plant.

Thermal Relief Sumps

These sumps collect for reprocessing hydrocarbons from piping relief valve releases.

Wastewater Strainer

The wastewater strainer receives flow from the aboveground and belowground sewer systems and flows to the CPI Separators.

Above Ground Sewer Pressure Control Manifold

This manifold consists of 4 motor operated valves, which open when aboveground sewer pressures are above 34 psi. It controls how many CPI separators are operating at any given moment and diverts wastewater flow from the separators to Tanks 23 and 24 if flows exceed proper operating ranges.

Corrugated Plate Interceptor (CPI) Separators

3 CPI Separators: L-1639, L-1640, and L-1641
- Avg Capacity 1000 gpm each
- Max Capacity 3,750 gpm each
- Length 14'
- Width 9'4"
- Height 13'8"
- Tops are 25' above grade

4th CPI Separator: I-1642
- Avg Capacity 200 gpm
- Max Capacity 800 gpm
- Processes float from Induced Gas Flotation Unit
- Float processed by one of the 1000 gpm separators if L-1642 out of service

CPI separators recover sludge and oil from process wastewater. Recovered oil from the CPI separators overflows into wet oil receiving drum Tank 55, and then is recycled through the slop oil system. Sludge from the CPIs, is normally pumped to sludge Tank 22, then recycled in the Coker under an exemption provided at 40 CFR 261.4(a)(12). A polymer is added to the IGF float at CPI L-1642 to aid removal of floatable solids. These solids are conveyed to Tank 22 or to a container for dewatering prior to being recycled at the Coker. Occasionally, in the event the material cannot be processed at the Coker, CPI sludge may be sent as a hazardous waste to an approved off-site facility.

Tank 55 Wet Oil Receiving Drum

Diameter 6'

This drum is a reservoir for recovered oil from the CPI separators prior to Tanks 907 and 908.

Heavy Slop Oil Tanks 907 and 908

Diameter 30' each
Height 30' each
Volume 159,000 gallons each
Receive wet oil from T-55

These tanks are heated with steam coils, which help water to sink to the bottom, and oil to float. Slop oil from them is pumped to heavy slop tank 900 then recycled.

Sludge Tank 22

This is a holding tank for sludge and sediment from the CPI separators. The contents are taken by vacuum truck to the Sludge Processing Unit hazardous waste sludge tank west of the Coker, then recycled in the Coker.

Wastewater Receiving Tank 54

Diameter 10'
Height 15'
Volume 8,8000 gallons
Cone roof

This tank is located downstream of the CPI separators. It stores CPI separator effluent, which is then pumped to Tanks 23 and 24.

Stormwater Retention Tanks (SWRTs) 23 & 24

Capacity 150,000 BBL or 6.34 million gallons each

The SWRTs provide storm surge storage and flow equalization prior to the IGF and the activated sludge aeration tank. Each SWRT is equipped with oil skimmers.

Induced Gas Flotation Unit (I.G.F.)

1 unit (L-1635) with 4 cells
Avg flow 2,000 gpm
Max flow 2,500 gpm
Length 40'8"
Height 10'8 ½"
Width 11' 11 3/4"
Surface Area 487 ft^2

The IGF further removes oil from the refinery's wastewater. Water from the IGF is pumped to the activated sludge aeration tank. Float is pumped to L-1642 CPI separators.

Activated Sludge Aeration Tank

Diameter 100'
Side Water Depth 20'
Volume 157,000 ft^3 or 1,200,000 gallons
Detention Time
@ Qmax: 10 hours
@ Qave: 24 hours

The activated sludge aeration tank biologically treats refinery wastewater. Mixed liquor is pumped to the clarifier/thickener tank.

Clarifier/Thickener Tank

Diameter 75'
Sidewater Depth 18'6"
Volume 81,730 ft^3 or 611,344 gallons
Detention Time
@Qmax: 5.1 hours
@ Qave: 12 hours

The clarifier separates mixed liquor from the activated sludge aeration tank into sludge and water. Water is recycled or discharged through outfall 101. Sludge is recycled to the activated sludge aeration tank or wasted to the aerobic digester.

Aerobic Digester

Diameter 40'
Volume 25,133 ft^3 or 187,993 gallons

Sludge from the aerobic digester is taken by vacuum truck to the nonhazardous waste sludge tank west of the Coker, then recycled in the Coker.

Storm Water Settling Basin

The storm water settling basin is a quiescent lagoon with a surface area of 5.2 acres. The settling basin is fed by the surface ditch collection system that extends throughout the non-oily areas of the refinery. Both the ditch system and the settling basin are equipped with haybasket filters. The settling basin is also equipped with three sections of oil spill containment boom. This equipment is employed to capture oil and filter out contaminants, which might reach the refinery ditch system in the event of spills. Surface water runoff from non-oily areas, firewater, and/or steam condensate flow through the settling basin and to the York River. In the event of a heat exchanger leak to once-through cooling water occur, once-through cooling water (outfall 102) may routed through the settling basin to prevent oil from reaching the York River until the leak can be isolated and repaired. Outfall 102 may also be diverted to the settling basin if maintenance is required. It is important to note that any such diversion of Outfall 102 to the settling basin does not result in any treatment process by-pass, but rather allow equivalent or additional treatment to occur.

Cooling Water Effluent Basin

The cooling water effluent basin is a 125' x 9' tank through which once-through cooling water passes prior to entering the York River. It is periodically visually inspected for signs of a sheen indicating a potential heat exchanger leak. From the effluent basin, cooling water flows to the York River at the end of the dock. However, if a sheen is detected, the cooling water will be routed through the settling basin to prevent oil from reaching the York River.

Tanks 26 and 27

Tank 26

Diameter 132'
Working Height 7'0"
Capacity 17,000 bbls

Tank 27
Diameter 120'
Working Height 29'0"
Capacity 58,000 bbls

Tank 26 and 27, formerly ballast water tanks are primarily used as flow equalization tanks in the refinery wastewater treatment system. The tanks may be adapted for use as a backup activated sludge aeration tank/clarifier train in the event of an outage at the activated sludge aeration tank or clarifier/thickener. In the event of a major oil spill, these tanks may also be used to receive from barges or trucks water/oil mixtures recovered from within the refinery or from surface waters for free product recovery and treatment.

ATTACHMENT 5

TABLE II - EFFLUENT MONITORING/LIMITATIONS

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL No.: 001
Outfall Description: Final discharge of treated process and sanitary wastewaters (internal outfall 101), and once-through cooling waters (internal outfall 102)

SIC CODE: 2911

(X) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance Date To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/Week	EST
pH (S.U.)	3		NA	6.0	9.0	1/Week	GRAB
Total Phosphorus (mg/l)	3		2.0	NA	NL	1/Week	24 Hr. Composite

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY
24Hr. Composite = 24-hour composite consisting of grab samples collected at hourly intervals and combined in proportion to flow.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (CONTINUED)

OUTFALL # 101
Outfall Description: Internal discharge of treated process and sanitary wastewaters, contaminated precipitation runoff from areas associated with refinery operations, and contaminated hydrostatic test waters

SIC CODE: 2911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	Continuous	Totalized and Recorded
pH (S.U.)	1		NA	6.0	9.0	Continuous	Recorded
BOD5 (lbs/d)	1		550	NA	990	1/Week	24 Hr. Composite
TSS (lbs/d)	1		440	NA	690	1/Week	24 Hr. Composite
TOC (lbs/d)	1		1200	NA	2200	1/Week	24 Hr. Composite
Oil & Grease (lbs/d)	1		160	NA	300	1/Week	Grab
Ammonia (as N) (lbs/d)	1		280	NA	620	1/Week	24 Hr. Composite
Total Phenols (lbs/d)	1		3.0	NA	7.4	1/Week	Grab
Sulfide (lbs/d)	1		2.7	NA	6.1	1/Week	24 Hr. Composite
T. Chromium (lbs/d)	1		3.6	NA	10	1/Month	24 Hr. Composite

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Hexavalent Chromium (lbs/d)	1		0.31	NA	0.68	1/Month	Grab
Fecal Coliform (N/CML)[a]	2		200	NA	NA	2/Month	Grab
Enterococci (N/CML)[b]	2		35	NA	NA	2/Month	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY
2/Month = Two samples taken during the calendar month, no less than two weeks apart.
24Hr. Composite = 24-hour composite consisting of grab samples collected at hourly intervals and combined in proportion to flow.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] Fecal Coliform monthly average is calculated as a geometric mean.
[b] Enterococci monthly average is calculated as a geometric mean.

The basis for the limitations codes are:

1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (CONTINUED)

OUTFALL # 102
Outfall Description: Internal discharge of once-through cooling water
SIC CODE: 2911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/Week	EST
Temperature (°C)	3		NA	NA	44	Continuous	I.S.
Net Total Organic Carbon (mg/l)	3		NA	NA	5.0	1/Week	24 Hr. Composite
Fecal Coliform (N/CML) [a]	2		200	NA	NA	2/Month	Grab
Enterococci (N/CML) [b]	2		35	NA	NA	2/Month	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY
I.S. = Immersion Stabilization
2/Month = Two samples taken during the calendar month, no less than two weeks apart.
24Hr. Composite = 24-hour composite consisting of grab samples collected at hourly intervals and combined in proportion to flow.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] Fecal Coliform monthly average is calculated as a geometric mean.
[b] Enterococci monthly average is calculated as a geometric mean.

The basis for the limitations codes are:
1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (CONTINUED)

OUTFALL # 002

Outfall Description: Precipitation from runoff associated with a regulated industrial activity, diverted flows from Outfalls 101 and/or 102 during necessary site activities, fire main wastewaters, and uncontaminated wastewaters from hydrostatic testing (internal outfall 201)

SIC CODE: 2911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/Week	EST
pH (SU)	3		NA	6.0	9.0	1/Week	Grab
Total Organic Carbon (mg/l)	3		NA	NA	35	1/Week	Grab
Oil & Grease (mg/l)	3		NL	NA	15	1/Week	Grab
Temperature (°C)	3		NA	NA	44	Continuous	I.S.
Total Phosphorus (mg/l)	3		2.0	NA	NL	1/Month	Grab
Total Nitrogen (mg/)[a]	3		NL	NA	NL	1/Month	Grab
Total Arsenic (µg/l) [a]	3		NL	NA	NL	1/Month	Grab
Total Cadmium (µg/l)[a]	3		NL	NA	NL	1/Month	Grab
Total Chromium (µg/l) [a]	3		NL	NA	NL	1/Month	Grab
Fecal Coliform (N/CML)[b]	2		200	NA	NA	2/Month	Grab
Enterococci (N/CML)[c]	2		35	NA	NA	2/Month	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY
I.S. = Immersion Stabilization
2/Month = Two samples taken during the calendar month, no less than two weeks apart.

24HC = 24-hour composite consisting of grab samples collected at hourly intervals and combined in proportion to flow.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Parts I.B.5. and I.B.6. for quantification levels and reporting requirements, respectively.
[b] Fecal Coliform monthly average is calculated as a geometric mean.
[c] Enterococci monthly average is calculated as a geometric mean.

The basis for the limitations codes are:
1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (CONTINUED)

OUTFALL # 201
Outfall Description: Discharges of wastewater generated by hydrostatic testing of storage tanks, conveyance piping, and other equipment associated with refinery operations

SIC CODE: 2911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS [a]	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/Year	EST
pH (SU)	3		NA	6.0	9.0	1/Year	Grab
Total Petroleum Hydrocarbons (mg/l)	3		NA	NA	15	1/Year	Grab
Benzene (µg/l)	3		NA	NA	50	1/Year	Grab
Toluene (µg/l)	3		NA	NA	175	1/Year	Grab
Ethylbenzene (µg/l)	3		NA	NA	320	1/Year	Grab
Total Xylenes (µg/l)	3		NA	NA	33	1/Year	Grab
Naphthalene (µg/l)	3		NA	NA	10	1/Year	Grab
Total Residual Chlorine (mg/l) [b]	3		NA	NA	NL	1/Year	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY
1/Year = Between January 1 and December 31.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] See Part I.B.9. for sampling and monitoring requirements for hydrostatic discharges.
[b] See Parts I.B.5. and I.B.6. for quantification levels and reporting requirements, respectively.

The basis for the limitations codes are:
1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment

TABLE II - INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING (CONTINUED)

OUTFALL # 004
Outfall Description: Discharge of wastewater associated with fire main flushing and freeze protection at offshore pier where tank vessels and barges moor during petroleum product transfer activities

SIC CODE: 2911

(x) Final Limits ( ) Interim Limits Effective Dates - From: Reissuance To: Expiration

PARAMETER & UNITS	BASIS FOR LIMITS	MULTIPLIER OR PRODUCTION	EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
			MONTHLY AVERAGE	MINIMUM	MAXIMUM	FREQUENCY	SAMPLE TYPE
Flow (MGD)	3		NL	NA	NL	1/Week	EST
pH (SU)	3		NA	6.0	9.0	1/Week	Grab
Fecal Coliform (N/CML)[a]	2		200	NA	NA	2/Month	Grab
Enterococci (N/CML)[b]	2		35	NA	NA	2/Month	Grab

NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY
2/Month = Two samples taken during the calendar month, no less than two weeks apart.

Upon issuance of the permit, Discharge Monitoring Reports (DMRs) shall be submitted to the regional office at the frequency required by the permit regardless of whether an actual discharge occurs. In the event that there is no discharge for the monitoring period, then "no discharge" shall be reported on the DMR.

[a] Fecal Coliform monthly average is calculated as a geometric mean.
[b] Enterococci monthly average is calculated as a geometric mean.

The basis for the limitations codes are:
1. Technology (e.g., Federal Effluent Guidelines)
2. Water Quality Standards (9 VAC 25-260 et. seq.)
3. Best Professional Judgment